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ABSTRACT

The Centre for Principal Development at the Ontario Institute for Studies in Education is a new organization devoted to research and professional development. This paper describes the framework for the center's research program and reviews research reported since 1985 that is relevant to each of the components. The review serves two purposes: (1) to identify aspects of the principalship most in need of further research; and (2) to establish a context for appreciating the significance of three studies in particular, focusing on three aspects of principals' internal mental states or processes: cognitive flexibility (Stager), values (Begley) and the processing of evaluation data (Cousins). The framework for the review is based on three major categories of concepts: effect on students, practices, and influences on principals. Other topics discussed include methodological characteristics of the research and a summary of the results in each of these three major categories. Extensive notes, references, and tables are included. (TE)

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The Nature, Causes and Consequences of Principals' Practices: A Framework for Research and Review of Recent Literature

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The Centre for Principal Development at OISE is a relatively new organization devoted to research and professional development. The research program of the Centre has been guided by an evolving framework aimed at better understanding the nature causes and consequences of what principals do. The main focus of research in the Centre was principals" practices (what they do): results of that research have been described by Leithwood and Montgomery (1986). More recently, the emphasis of the Centre's research program has shifted toward an exploration of external influences on what principals do (e.g., Trider and Leithwood, in press) and the internal mental states which mediate such influences.

In this paper I describe the framework for the Centre's research program and at the same time review research reported since about 1985, relevant to each of the components of the framework: this is research undertaken by others, as well as Centre research. Two purposes are to be served by the paper. One purpose is to identify those aspects of the principalship most in need of further research. A second purpose is to establish a context for better appreciating the significance of the three studies reported by my colleagues (Stager, Cousins & Begley) in this symposium. These studies focus on different aspects of principals' internal mental states or processes: cognitive flexibility (Stager), values (Begley) and the processing of evaluation data (Cousins).

Framework

Figure 1 provides an overview of the framework currently guiding the Centre's research program. At first glance, the framework appears unreasonably deterministic and somewhat naive in terms of the flow of influence (from sets of variables on the left to sets of variables on the right). However, as the framework is used, I will be clearer about the interactions among the six components contained within the 3 major categories of concepts labelled Impact, Practices and Influences.

The Figure is intended to suggest that what principals do - their "practices" (component #2) - is most directly a consequence of what they think - their mental

processes component #2.2). Such mental processes are a function of certain characteristic ways of understanding applied to the environment in which they work. Elements of this environment (component #3.1) may be interpreted by principals in many ways and certain elements turn out to have much greater impact on their thinking than other elements. Training is an example of a potential influence on the thinking of principals. Effective training has substantial influence; ineffective training little or no influence.

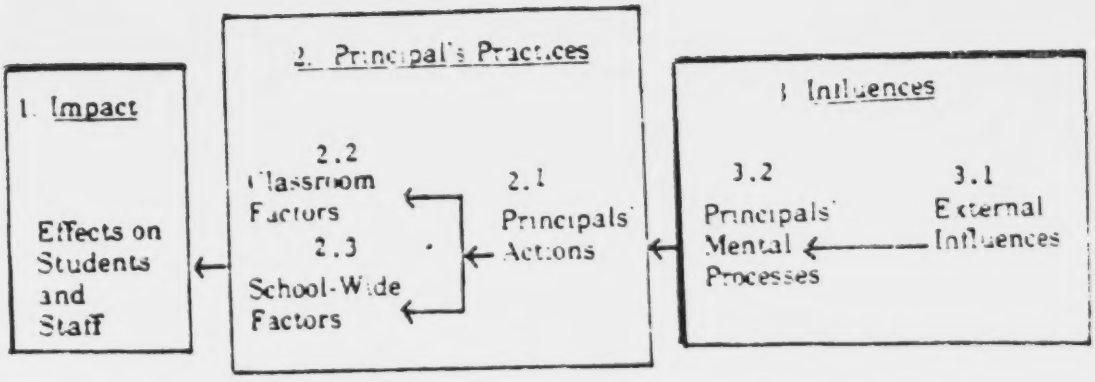

Figure 1: A framework to guide the review of literature on the nature, causes and consequences on principals' practices

Principals have been observed to engage in quite distinct patterns of practice (component #2.1), shaped by how they think about their work. Three or four such patterns are particularly evident among North American principals and these patterns have demonstrated widely varying impacts on classroom practices or factors (component #2.2) and factors within the school but outside the classroom (component #2.3). It is primarily through such influence that principals affect pupils and others (component

#1), although some aspects of their practices are more direct in their impact. In order to provide more detailed understanding of the framework and to assess the current state of research knowledge about the principalship, empirical research reported in the past several years was reviewed.

Review Method

Sampling Procedure

Because I have written three quite comprehensive prior reviews of research Leithwood, 1986; Leithwood & Montgomery, 1982; Leithwood and Montgomery, 1986) the search for new research was restricted to the period between 1985 and the present. For the most part, the review summarizes pre-1985 research and extends those results with specific reference to current research. Several exceptions to this general reporting strategy were made in the interests of comprehensiveness.

An electronic search through ERIC and Onteris (Ontaris is an Ontario electronic data-base) files was completed and a manual search done of relevant journals, books and the Dissertation Abstracts. The Canadian Education Index and Canadian Books in Print were also searched manually. The ERIC search produced approximately 1025 titles; these titles were widely dispersed in terms of national origin but were predominantly written by U.S. authors. The other searches, combined, produced approximately 100 titles, most authored by Canadians.

From the titles alluded to above, articles or books which met two criteria were selected. In order to be reviewed a report had to be based on systematically collected empirical evidence and include sufficient description to reconstruct the main elements of the research methods used. These criteria reduced the number of titles from in excess of 1100 titles to the 61 studies included in this review. Studies of both elementary and secondary principals were included in the review.

Methodological Characteristics Of The Research

Table 1 summarizes the methodological characteristics of the 54 studies included in the review. Such characteristics are reported for each study, separately, in Appendix A. Four broad categories were used to describe the designs used in the studies; one-shot surveys, and multiple case studies were the most common, followed by individual case studies and a category labelled other. In the other category was High and Achilles' (1986) modified "outlier" design[1] combined with a survey and surveys repeated over several years by Andrews, Soder and Jocoby (1986) and Montgomerie, McIntosh and Mattson (1987).

Six groups of people provided information in the studies; school staffs in a variety of roles, school administrators, teachers, students, central office administrators, and elected trustees, community members and others. Information was collected from two groups of people in 12 studies and from three or more such groups in 14 instances. The 35 remaining studies relied on one source of information only.

The dominant sampling procedure was some form of non-random selection (e.g., volunteers, principals designated as "highly effective"). Ten studies incorporated all relevant respondents within a jurisdiction, usually a school district (in 5 cases) or a state or province (in 5 cases). Seven studies sampled respondents randomly within a selected jurisdiction[2] Sample size varied considerably. Hart (1987) conducted a single case study, at one extreme, whereas the Andrews et al. (1986) sample included a total of 4,448 teachers and 3,515 students. Twenty-two studies had sample sizes between 100 and 1000. Information was collected by one method only, in the case of 36 studies; this was through questionnaires), interviews or observations. Nineteen studies used two sources of information and three or more sources were used in six studies. Student achievement tests were among the instruments used in five studies.[3] As Table 1 indicates, there was a disproportionate amount of attention given, within the 61 studies, to three of the five questions of interest in the review. The nature of principals' practices was explored in almost 70 percent of the studies, external influences on such

Table 1: Methodological Characteristics Of Studies
(N = 54)

COMPONENT	METHODOLOGICAL ALTERNATIVES	NUMBER OF STUDIES
Design	. survey	33
	. case study	4
	. multiple case studies	20
	. other	3
Role of Subjects	. school administrators (principals, ass't. principals)	49
	. school staffs	8
	. teachers	18
	. students	2
	. elected trustees, community members, other	5
	. central office administrators	5
Sampling Procedures	. non-random selection	40
	. total population within a jurisdiction	11
	. random within a jurisdiction	3
	. not reported or unclear	2
Sample Sizes	. not reported or unclear	3
	. 1	1
	. 2-10	10
	. 11-99	21
	. 100 - 1000	22
	. more than 1000	3
Sources or Instruments	. questionnaire only	20
	. interview only	11
	. observation only	5
	. 2 sources	19
	. 3 sources	6
	. achievement tests	5
	. external	4
Nature of Information	. influences on principals' practices (obstacles)	36
	. mental processes	26
	. nature of principals' practices and behaviors	42
	. factors influenced by principals	5
	. impact of principals' practices	7

practices in over 60 percent and mental processes of principals in about 43 percent of the studies. Only five studies inquired into the classroom or school factors through which principals impact on their schools. The nature and extent of that impact was explored in only six studies.

How much confidence can be placed in the results of this group of studies, given such methodological characteristics? A detailed answer to this question will not be attempted in this paper. The studies, as a whole, however, are methodologically weak (with a number of significant exceptions). For this reason the overall gestalt or picture presented by their results may be deceptive especially in respect to the relationship depicted among the components of the framework used for this review. For example, none of the designs used in the quantitative studies (majority) are well suited to establishing cause and effect relationships; triangulation, one method for compensating for weak designs by including multiple data sources and data collection procedures was used in only a handful of studies (e.g., 6 studies used 3 or more data sources). Further, although a number of the single and multiple case studies, using qualitative techniques, provided rich data about some of the relationships, the total number of these studies was still not sufficient for drawing firm conclusions.

Results

Principals' Impact

The most recent of my prior research reviews (Leithwood & Montgomery, 1986, ch. 11) identified 40 empirical studies of elementary principals' impact on some aspect of their schools. Six additional current studies were located for the present review.[1] Table 2 summarizes the results of these two sets of studies by indicating the nature of the impact reported, the number of pre-1985 studies concerned with each type of impact for which there were data, the focus of research reported from 1985 through 1987 and principals' practices found to have impact in the six current studies. Recent studies provided additional evidence concerning principals' impact on students' basic skills,

teachers' job satisfaction and their use of innovative teaching practices. Four additional types of impact on teachers were explored in these studies.

Table 2: A summary of the results of research on the elementary principals' impact

Nature of Principals' Impact (Dependent Variables)	No. of Pre-1985 Studies	1985-1987 Studies	Principals' Practices Associated with Impact (Independent Variables)
1. Positive student attitudes toward school	2	-	
2. Achievement in basic reading math skills	15	Andrews (1986)	(a) mobilization of resources (b) communication (c) instructional involvement (d) visible presence
3. Reduced vandalism & absenteeism	2	-	
4. Teachers' job satisfaction	7	Blase et al. (1986) Brady (1986)	(a) initiation of structure (b) consideration (principal supportiveness)
5. Teachers' use of innovative practices	11	Sharman (1987)	(a) evaluation (b) supervision (c) staff development
6. Teachers' perception of principals' leadership	5	-	
7. Teachers' loyalty to principal	-	Johnson & Venable (1986)	(a) rule administration (b) hierarchical influences
8. Teachers' "zone of acceptance"	-	Hoy & Brown (1986)	consideration (principal supportiveness)
9. Teachers' perception of staff intimacy	-	Brady (1985)	consideration (principal supportiveness)
10. Teachers' perceptions of group versus individual decision-making	-	Brady (1985)	consideration (principal supportiveness)
11. Teachers' use of interactive model for curriculum planning	-	Brady (1985)	consideration (principal supportiveness)

Andrews et al. (1986) used the gain scores on students as standardized achievement tests to explore the effects of principals rated by their teachers as strong, average or weak leaders. Significant correlations were found between achievement and strength of leadership for both math and reading gain scores. In this study, strength of leadership was a function of (a) the extent to which the principal mobilized personnel and

other types of resources to achieve the school's goals, (b) the clarity of communication concerning the school's goals, (c) the extent of active involvement in the schools instructional program, and (d) the extent to which the principal was a visible presence in different parts of the school (teachers were given these criteria).

Blase, Dedrick and Strathe (1986) used teachers responses to questions about their principal's behavior,[5] stress caused by their principal and the principal's impact on their classroom performance to explore correlations with teacher job satisfaction. A moderately strong association was found between teacher satisfaction and the degree to which the principals' initiation of structure (the extent to which a leader initiates, organizes and defines work to be done and the manner to which it will be done) and consideration behaviors (behaviors related to enhancing worker's self-esteem) were perceived to help teacher performance. Brady (1985) found "principal supportiveness" or consideration, in particular, to be the most consistently significant predictor of staff perceptions concerning the prevelence of group, as opposed to individual, decision-making in the school. Such supportiveness was also related, in the teachers' view, to principals' involvement in curriculum decisions,[6] the use of an interactive (rather than an objectives-driven) curriculum planning model, intimacy among staff and satisfaction with the school curriculum.

Sharman (1987) explored the relationship between the degree of teachers' implementation of a new math program and principals' evaluation, supervision and staff development initiatives. Results suggested that the more directly such initiatives were seen to support implementation the greater the level of use of the innovation by teachers.

Loyalty, "the extent to which teachers are committed to the principal and have an unquestioning faith and trust in the principal" (p.10) was the dependent variable in the Johnson and Venable (1986) study. Different types of principals' rule administration behavior and principals' influence in the school system hierarchy were used as independent variables. Results suggested differences among elementary and secondary teachers in

their reaction to different types of rule administration. Greater loyalty among elementary teachers was most closely related to less "punishment centered" rule administration (less conflict, less tension, and less explicit enforcement of rules) by principals. More representative rule administration (joint rule, initiation and acceptance) was most closely related to secondary teachers loyalty to the principal. The loyalty of both groups of teachers was associated with their perception of the principals' ability and willingness to exert influence upwards in the school system hierarchy and to do things for the teacher.

Hoy and Brown (1986), like Blase et al. (1986) and Brady (1985) examined the effects of principals' initiation of structure and consideration. Both aspects of leadership were found to be related to the teachers' "zone of acceptance" (their readiness to accept decisions made for them by the principal). Together, these two sets of behaviors accounted for 38% of the variance in teachers' zone of acceptance. As with Johnson and Venable (1986), differences between elementary and secondary teachers were found: Secondary teachers attributed overriding importance to the principals' initiation of structure.

Summary and Conclusions: Principals' Impact

Table 2 suggests significant limitations of current knowledge about the nature of principals' impact. Based on the number of studies alone, one can reasonably conclude that principals are capable of having a significant influence on the basic skills achievement of students. A recent review of school effects in the Third World (Fuller, 1987) also attributes such impact to principals. As well, principals seem capable of influencing teachers' adoption and use of innovative classroom practices and teachers' job satisfaction. Evidence concerning other types of impact is extremely thin, however. Four suggestions for subsequent research on principals' impact seem warranted by this evidence.

First, research to date has been concerned with the principals' impact on an important but highly restricted set of student outcomes (attitudes toward school, basic skills, vandalism and absenteeism). Such outcomes reflect neither the scope nor the em-

phasis of the full range of outcomes for their students to which many schools aspire. Such schools, for example, often view basic math and reading skills as instrumental in fostering growth in higher order thinking skills and the acquisition of complex, discipline-based concepts and theories. Many schools have also assumed responsibility for assisting students in the development of social and attitudinal outcomes (e.g., self-concept, esteem for the culture and customs of others) of special importance in light of changing family and community contexts. Subsequent research should begin to inquire into how principals can impact on outcomes of this sort, outcomes which better reflect the mission of so many elementary schools, in particular.

A second suggestion for subsequent research concerns the nature of principals' impact on teachers. There is no underlying, comprehensive theory dictating the choice by researchers of what types of impact on teachers to examine. Further, with the noteable exception of teachers' use of innovative practices, all of the research to date has focussed on attitudes and dispositions only loosely linked to teachers' performances. Of more value, in future research, would be a choice of teacher outcomes driven by a theory or theories of teacher growth in classroom effectiveness (see, for example, Bacharach, Conley & Shedd, 1987).

Third, perhaps the school characteristic currently of most interest in efforts to understand effective schools is school culture, or ethos. This characteristic is not independent of students and teachers. It is, however, a more composite feature of schools that cannot be understood by looking only and separately at students and teachers. While schools which vary in effectiveness also appear to vary in the nature of their culture, it is not clear whether principals' can significantly influence school culture. This makes culture a promising focus for attention in subsequent research on principals' impact.

Finally, little attention has been devoted to clarifying the relative impact on student outcomes of school administrators as compared with such other potential influences as teacher characteristics, curriculum materials, testing programs, innovative teaching practices, and the like.[9] Because school improvement resources are always limited,

choices have to be made concerning school improvement strategies. Evidence of the relative impact on students that can be expected by improving principal effectiveness (through training, for example) as compared with providing better curriculum materials, etc., is critical to such choice." As Farrel (in press) suggested, in schools devoid of textbooks, as in many developing countries, the provision of more texts can lead to substantial increases in student learning. On the other hand, where schools are reasonably well equipped with texts, providing even more is not likely to have much effect. The same is likely to be true for "improving the principal" as a strategy.

Principals' Practices

Thirty recent studies provided information about the overt behaviors or practices of principals: 4 studies inquired into roles; 5 described principals' overall patterns or styles; 7 focussed on the practices of "typical principals" and; 14 studies examined the practices of highly effective principals.

Roles

Prior to 1985, research on the principalship included efforts to clarify principals' roles beginning from two quite different premises. One premise was that the role could be viewed as predominantly unidimensional and the research objective was to discover the dimension which best captured the role. Principals, for example, were claimed to play a largely managerial role or largely a leadership role: they were concerned most with administration or with instructional leadership (Cuban, 1986). Results of this research usually found typical practice consumed by managerial or administrative tasks but desired practice best captured in leadership roles focused on substantive educational decisions in the school.

Other research on principals' roles, however, was based on the premise that the role was multidimensional. Sergiovanni's (1984) five "leadership forces" illustrate reasonably well the range of dimensions the principal's role was found to encompass in this research. These dimensions included technical management activities, provision of

interpersonal support and encouragement to staff, instructional intervention, modeling important goals and behaviors and signalling to others what is important (symbolic leadership), and developing an appropriate and unique school culture.

All four of the current studies of principals roles assumed a multidimensional view of the role. Brubaker and Simon (1987) inquired about the actual and preferred roles of principals from among five possibilities: principal teacher, general manager, professional and scientific manager, administrator and instructional leader, and curriculum leader. Each of these roles was described in paragraph length and included at least several dimensions of practice. Most principals viewed their present role as administrator and their preferred role as instructional leader. General manager was rated a distant second as present role and curriculum leader and professional-scientific manager tied for second choice as preferred role. Gender differences emerged in this study with women giving much higher ratings for actual and preferred roles to administrator and instructional leader and curriculum leader roles. Men, in contrast, rated the general manager role much higher than women as both an actual and preferred role.

Gousha's (1986) survey also found highest ratings given to instruction leadership as a description of actual and preferred roles. Other roles rated highly were school manager, personnel leader and disciplinarian. These role ratings were not consistent with principals' estimates of the time spent on five key tasks associated with their role. School management and teacher-student concerns (personnel leadership) consumed 40.8% and 34.1%, respectively. School improvement (instructional leadership), on the other hand, consumed only 15% of their time.

The disciplinarian role was the special focus of attention in Montgomery, McIntosh and Mattson's (1987) study. Opinions were solicited from teachers, superintendents, principals and board chairs concerning the relative importance of roles played by principals. The framework for this study was a modified version of Sergiovanni's leadership forces: the disciplinary role was added and cultural and symbolic forces were collapsed. Results of this study, combining the opinions of the four groups of respondents, gave

strongest weight to the symbolic, disciplinarian and humanistic roles and least weight to the instructional and technical roles. Teachers, however, showed a strong preference for the disciplinarian role of the principal.

A fourth study of roles by Bradeson (1985) identified three metaphors for the role adopted by principals and others with whom they interacted. The role appeared to be dominated by a metaphor of maintenance -- principal as the person who sees and understands the total process and is responsible for keeping the process going. About three quarters of the time of principals was devoted to maintenance tasks and about five or six percent of this time was devoted to tasks associated with each of two additional role metaphors -- survival and vision. Survival tasks were those focused on meeting such immediate needs as short range planning. The ability of the principal to holistically view the present, to reinterpret to all its constituents the school's mission and to speculate about future directions was Bradeson's meaning of vision.

Patterns or Styles

Research aimed at describing patterns or styles of principal practice has examined such practice in more depth than has the roles perspective: it has attempted either to identify dominant orientations to the role without concern for differences in impact or to define progressively more effective styles or patterns of practice. Results of pre-1985 research using this approach are summarized by Leithwood and Montgomery (1986) Figure 2 in terms of four leadership styles identified in common across four studies.

Leadership style A is characterized by a focus on interpersonal relationships: on establishing a cooperative and congenial "climate" in the school and effective, collaborative relationships with various community and central office groups. Principals adopting this style seem to believe that such relationships are critical to their overall success and provide a necessary springboard for more task-oriented activities in their schools.

Student achievement and well-being is the central focus of leadership style B. Descriptions of this class of practices suggests that while such achievement and well-being is the goal, principals use a variety of means to accomplish it. These include

Leadership Style	Hall et al. (1984)	Blumberg & Greenfield (1980)	Salley et al. (1978)	Leithwood Ross & Montgomery (1978)
A. Interpersonal Relationships Focus	-Manager -Initiator	-Humanist -Broker -Politician -Helper -Catalyst	-Involve and Support Groups	Interpersonal Leader
B Student Achievement Focus	-Initiator	-Juggler	-Student Academic Performances	Eclectic Leader
C Program Focus	-Manager	-Organizer -Rationalist	-Develop Staff	Formal Leader
D Administration Focus	-Responder		-Managerial Control	Administrative Leader

Figure 2: A comparison of patterns or styles of principals' practices (Reproduced from Leithwood & Montgomery, 1986, p. 225

many of the interpersonal, administrative, and managerial behaviours that provide the central focus of other styles.

Compared with styles A and B, there is less consistency, across the four studies reviewed, in the practices classified as style C (program focus). Principals adopting this style, nevertheless, share a concern for ensuring effective programs, improving the overall competence of their staff, and developing procedures for carrying out tasks central to program success. Compared with style A, the orientation is to the task, and developing good interpersonal relations is viewed as a means to better task achievement. Compared with style B, there is a greater tendency to view the adoption and implementation of apparently effective procedures for improving student outcomes as a goal -- rather than the student outcomes themselves.

Leadership style D is characterized by almost exclusive attention to what is often labelled "administrivia" -- the nuts and bolts of daily school organization and maintenance. Principals adopting this style, according to all four studies, are preoccupied with budgets, timetables, personnel administration, and requests for information from others. They appear to have little time for instructional and curriculum decision-making in their schools tend to become involved only in response to a crisis or a request.

Hall and his colleagues (Hall et al., 1984) argued that their three styles (responder, manager, initiator) have different effects on the process of school improvement. Initiators are more successful in their school improvement efforts, responders are least successful. Paragraph length descriptions are provided for each of these styles.

In order to better understand the specific practices associated with each of the Hall et al. styles, Stevens and Marsh (1987) inquired about principals' vision and strategies for achieving their vision. Results suggested that more effective styles were associated with a greater number and better integrated visions more directly focused on program-related matters. More effective styles also were associated with a greater range of strategies and more effort in their strategies to focus on a combination of daily, small-scale and comprehensive, large-scale changes.

Research by Leithwood and Montgomery (1986) resulted in a much more detailed (chapter length) description of four multidimensional patterns of practice ordered from least to most effective in accomplishing a complex array of student outcomes. The patterns are labelled administrator (least effective), humanitarian, program manager and systematic problem solver (most effective).

Three additional studies since 1985 have focused on principals' styles more or less directly based on a conception of leadership provided by the Ohio State Leadership Studies in the 1960's. Consideration and initiation of structure are the two dimensions defining this conception. Hoy and Brown's (1986) survey suggested that high degrees of both principals' consideration and (especially) initiation of structure influenced teachers' readiness to accept decisions made for them by principals (their "zone of acceptance").

Blase et al. (1986) reported similar results in relation to teacher satisfaction and classroom performance. Teachers and principals responding to Brady's (1985) survey attributed substantial importance to the supportiveness (or consideration) of principals in fostering a variety of desirable attitudes among staff.

Typical Practice

Judged by the quantity of research available, interest in describing multiple patterns or styles of practice has been quite restricted. In contrast, there have been a relatively large number of studies designed to describe and understand both "typical" and "highly effective" forms of practice. Of the 75 empirical studies conducted between 1975 and 1985 included in the Leithwood/Montgomery (1986) review, 52 (69%) were concerned wholly, or in part, with the nature of typical practice. These studies were almost evenly split in their use of either survey research strategies or more in-depth methods, variously called ethnographies, case studies or field studies.

Studies of typical practice usually differ from studies of principal roles and patterns of practice in terms of the detail of information they seek to provide; this is especially the case for studies that have used ethnographic, case and field study methods. Leithwood and Montgomery's (1986) "dimensions" of principals' practices or behavior are a useful tool for bringing some conceptual coherence to such detailed descriptions. These dimensions include (a) the goals[8] principals attempt to achieve in their schools (nature, source and use of such goals), (b) factors in classrooms and that school which principals believe they must influence to accomplish their goals (choice of factors, nature of expectations held for factors, source of these expectations), (c) strategies used to influence such factors (criteria for choosing strategies, emphasis among strategies, characteristics of strategies) and (d) the nature of decision-making processes. The summary of the administrative pattern of practice (level 1, least effective), illustrates the results of research up to 1985 concerning typical principal practice in each of these four dimensions:

(a) Goals

- derived from personal needs
- focus on school administration rather than students
- pursuit of instructional goals considered to be responsibility of staff not principal
- conveys goals to others if requested

(b) Factors

- attempts to influence factors bearing on school appearance and day-to-day operations (mostly non-classroom factors)
- expectations within factors are vague
- expectations are derived from personal experiences

(c) Strategies

- chooses strategies based on personal need to maintain administrative control and remain uninvolved in classroom decisions
- strategies mostly limited to use of vested authority and assisting staff with routine tasks
- attends to factor-specific strategies in a superficial way if requested to do so

(d) Decision-making

- uses primarily autocratic forms of decision-making
- decision processes oriented toward smooth school administration and based on personal sources of information
- decision processes are reactive, inconsistent, and rarely monitored.

Of the seven recent studies included in this review, five used variants of the more in-depth research strategies already mentioned. All but one of these studies provided information about at least one of the four dimensions above. Kingdon (1985) compared expectations for the role of the full time teaching principal, on the part of such principals, with expectations normally held for the role; other aspects of their activity were also examined. Few differences in expectations were found but teaching principals did give

first priority to their teaching assignments and did most of their administrative work outside regular school hours.

Bradeson (1986) was the only study to provide information about the goals of the typical principal. Such information was available in his analysis of the purposes served by carefully recorded daily communications. These purposes and the percentage of communications devoted to them by principals were (a) maintenance messages, concerned with policies and procedures (49.8%), (b) human messages, concerning peoples' attitudes, morale and satisfaction (25.6%), (c) task messages, concerned with the quality and quantity of educational services (23.7%) and (d) innovation messages, concerned with school improvement (1%). These four sets of purposes correspond closely to the foci of major concern in each of the four patterns of practice reported by Leithwood and Montgomery (1986). "Running a smooth "ship" (p. 17) both organizationally and interpersonally, appeared to preoccupy the typical principal."

The single study of principals' decision-making, among the seven reviewed, was conducted in seven secondary schools in Great Britain (Chater, 1985). No effort was made to identify relative levels of effectiveness of their principals (heads). Results suggested that while most principals sought relatively low involvement from staff on financial matters there was some variation among schools in other decision areas. Many staff were satisfied to have low levels of involvement in school decisions because it reduced their uncertainty. Only one school used highly participatory forms of decision-making; staff liked it that way.

Three studies provided information about principals' strategies. Focusing on communication patterns, Bradeson (1986) found considerable variation in the location of principals' communication. Almost three quarters of principals' activities were interpersonal and took place with only one other person -- over half involving face-to-face contact. The main thrust of these results was replicated by Davies (1987) in Great Britain and by Gally (1986) in Israel. In fact, typical principals' activities in most countries where data are available (e.g., U.S., Canada, Australia, Great Britain, Israel) appear to be characterized by brevity, fragmentation and variety.

Four studies touching on factors principals influence provide minimal information about practices within this component. Williams (1986) inquired into principals' influence on 14 components (factors) of teachers' instruction. Classroom composition, teaching materials and resources and instructional methods were factors principals perceived themselves to influence. Instructional methods, including student grouping, facilities and the community were domains (factors) used by Gally (1986) to explore the location of administrative activities. The extent to which principals influenced these factors was not explored in this study. A similarly designed study in Great Britain (Davies, 1987), although not directly investigating specific factors influenced by principals, suggested that heads spent nearly half their time dealing with classroom factors. This is not typical practice in most countries and may be a function of the traditional "head-teacher" role of the headmaster in Great Britain. Ehiametalor (1985) examined the actual and expected levels of performance of principals in Nigeria in influencing factors classified as curriculum and instruction, staff and students, the community, school organization and structure, and budget. Principals were classified by age, experience and training. For the most part, all categories of principals performed below expected levels; performance was substantially higher, however, for principals with 12-19 years experience.

Effective Practice

A relatively large amount of research activity was devoted to studies of effective practice between 1975 and 1985; Leithwood and Montgomery (1986) identified 51 such studies in their review. As was characteristic of research on typical practice, studies of effective practice were approximately evenly divided between survey designs and designs variously referred to as ethnographies, case and field studies.

The summary of the systematic problem solver pattern of practice (level 4, most effective), illustrates the results of research up to 1985 concerning highly effective principal practice:

(a) Goals

- selected from multiple public sources
- highly ambitious for all students
- transformed into short term goals for planning
- used to actively increase consistency among staff in directions they pursue

(b) Factors

- attempts to influence all factors bearing on achievement
- expectations within factors are specific
- expectations derived from research and professional judgement

(c) Strategies

- uses a wide variety of strategies
- criteria for choice include goals, factors, context, and perceived obstacles
- makes extensive use of factor-specific strategies to achieve goals

(d) Decision-Making

- skilled in use of multiple forms; matches form to setting and works toward high levels of participation
- decision processes oriented toward goals of education, based on information from personnel, professional, and research sources
- anticipates, initiates, and monitors decision processes

Thirteen current studies of effective practice were included in this review. Three of these studies explicitly compared typical and effective practice. By far the largest proportion of attention (12 studies)[9] was devoted, in these studies, to strategies used by principals: four studies spoke to the goals of effective principals, two concerned factors and three described aspects of decision-making.

With respect to goals, highly effective principals were found to demonstrate high levels of commitment to goals for the schools, especially instructional goals. They ensured that school instructional goals were congruent with district policies. Such prin-

cipals articulated an overall vision for the school which is multifaceted. This vision emerges from a belief that all children can learn what the school has to offer. Effective principals set relatively high professional and school standards for goal achievement and actively worked toward the development of widespread agreement concerning such standards (Taylor, 1986; Dwyer, 1986; Andrews et al, 1986; Larsen, 1987).

Two studies provided information about effective principals approach to classrooms and school factors. Larsen's (1987) data suggested substantial efforts to influence the classroom curriculum, teachers' instructional behaviors, material resources for instruction and the general environment of the school (climate or culture). Dwyer's (1986) study identified seven such targets for principals: work structure, staff relations, student relations, the environment, plant and equipment, community relations, and institutional relations.

The relatively large number of studies identifying strategies used by effective principals generated 22 such strategies. Ten of these strategies were identified in just one study and are not reported here. Those strategies identified in three or more studies included:

- Monitoring student progress
- Teacher evaluation and supervision
- Establishing and communicating clear, high expectations for students and staff
- Establishing and enforcing an equitable discipline code
- Maintaining a positive school climate

Strategies associated with effective principals in two studies included:

- Goal setting, planning and program development
- Mobilizing and allocating resources
- Modelling
- Being actively involved in staff development for teachers and self

- Developing good working relationships with staff, community and central office staff

Two of the three studies touching on effective decision-making processes of principals provide additional support for already well-established claims concerning the benefits of participatory decision-making. Stanard's (1986) case study of a single principal attributed a portion of the principal's success in solving discipline problems to her involvement of parents and staff in both curriculum and discipline decisions. Johnson and Venable (1986) found that participatory forms of decision-making ("representative rule administration") were associated with greater teacher loyalty to the principal among at least secondary teachers; the data were less conclusive with respect to elementary teachers.

High and Achilles' (1986) data were partly at odds with the general support found for participatory forms of decision-making. Their study inquired into principals' and teachers' preferences for the use of seven different bases of social power by the principal. Teachers ranked highest bases of power labelled expert power, legitimate authority and norm setting power. Principals awarded more potential to involvement and less to legitimate authority bases than did teachers. These results prompted High and Achilles to comment, in their conclusions:

> Principals in general have apparently been reading too much of the 1960's literature (togetherness) and believing it." (p. 15)

Summary and Conclusion: Principals' Practices

The 30 recent studies of principals' practices reviewed in this section of the paper provide information about principals' roles, different patterns or styles, typical practices and effective practices.

The significance of research on roles appears to be threefold. First, the principals' role is clearly multidimensional and further efforts to identify the "most important" dimension would be misdirected. Second, among the many role categories used as frameworks for research, Sergiovanni's five "leadership forces" supplemented by a disciplinary category seems to represent available data as well as any. Finally, in light of

the more detailed knowledge about principals' practices generated from other perspectives, a role perspective no longer offers a useful framework for subsequent research.

Research on patterns or styles of practice supports the claim that principals carry out the job in distinctly different ways. Most of these differences are well represented by four foci: a student achievement focus, a program focus, an interpersonal focus and a focus on routine maintenance activities. Furthermore, these foci appear to constitute levels of effectiveness in which the main concerns defining lower levels (e.g., a focus on routine maintenance) are incorporated into and subsumed by the concerns defining higher levels (e.g., a student achievement focus).

The extensively researched dimensions of leadership labelled consideration and initiating structure are important dimensions within each of these four levels or styles, consideration being the main concern of principals with an interpersonal focus. But further research within the limitations of theoretical and methodological frameworks traditionally used to explore these dimensions cannot be justified: the importance of the two dimensions is no longer in question. Detailed knowledge of practice within each dimension is what is still lacking.

Recent studies of typical practices reinforce but do not extend prior knowledge about such practices. Such studies paint a surprisingly uniform picture of such practice across many national contexts. Heads in Great Britain were somewhat unique in their orientation to classroom factors.

Finally, recent research on effective principal practices confirmed the central role of principals' goals -- their nature, source and uses -- in explaining effective practice. These goals form a central part of the vision principals use to bring consistency to an otherwise unmanageably diverse set of demands. Effective principals act to influence a broad array of school factors with an extensive repertoire of strategies. Their priorities are expressed in their day-to-day actions; they are better attuned, than are typical principals, to behaviors that actually influence teachers. Effective principals use participatory decision-making selectively but frequently, depending on their assessment of the context.

Influences on Principal Practices

Influences on principals' practices were examined using two sets of research. The first set included 18 empirical studies previously analysed by Leithwood and Montgomery in their 1982 literature review: results of these studies are only briefly summarized in this section. The second set, receiving more attention, included studies reported from 1982 through 1987, with greatest emphasis on the 1985 to 1987 period. These studies were organized, for purposes of this review, according to their conceptualization of independent, mediating and dependent variables, as follows:

Set A: Studies which defined external influences as the independent variables and principals' practices as dependent variables (no mediating variables). Previous reviews of literature spoke only to this set of relationships;
Set B: Studies which defined external influences as independent variables and principals' internal mental states or processes as dependent variables;
Set C: Studies which defined internal mental states or processes as independent variables and principals' practices as dependent variables;
Set D: Studies which defined external influences as independent variables, internal mental states or processes as mediating variables and principals' practices as dependent variables.

Set A: External Influences and Principals' Practices

Relationships between external influences and principals' practices we explored using a previous literature review and two more recent survey studies.

Leithwood and Montgomery's (1982) review of 18 relevant studies identified 5 classes of "obstacles" standing in the way of principals providing instructional leadership (the dependent variable): four of these were external to the principal.

Obstacles presented to principals by teachers included the following:

- lack of knowledge and skill about new practices
- uneven professional training
- lack of motivation to change, to participate in in-service training, and to collaborate in planning
- teacher autonomy
- constraints on program decision-making resulting from collective bargaining and union contracts.

Several features of the principal's role were viewed as obstacles. These included the following:

- ambiguity: unclear expectations, conflict about responsibilities
- complexity: number of people to consider, number of tasks.

Those characteristics of school systems identified as obstacles to principals were as follows:

- hierarchical structures and problems they created in making changes
- excessively rigid and time-consuming policies and procedures
- provision of inadequate resources
- conservative stance of central administrators toward school-initiated change.

Finally, the community was also viewed as a source of obstacles to principals in their efforts to be more effective. These included:

- the interests of parents (too much or too little)
- pressure of special interest groups in the community
- excessively conservative views about the nature of appropriate school programs

Four recent studies provided support for the general thrust of the results reviewed by Leithwood and Montgomery (1982). In a follow-up study by Leithwood and Montgomery (1984), principals reported having only moderate concerns about the four sets of obstacles (above) as a whole. Obstacles associated with school systems appeared to present the greatest difficulties but no strong relationships were found between classes of obstacles and principals' effectiveness.

Obstacles associated with the system also dominated evidence presented by Crowson and Morris (1985) and Louis (in press). Crowson & Morris (1985) suggested that, in one large urban school district, between a half and a third of principals' time was consumed in responding to formal, hierarchical controls largely having to do with budget, personnel and pupil behavior. Informal reward systems provided by the system (e.g.,

getting a better school, promotion) attracted considerable additional time of principals. Louis (in press) also reported a strong but indirect influence by superintendents and other district office staff on the planning and design of school improvement efforts in a large sample of U.S. secondary schools. While the board was not the dominant source of problems in school improvement efforts, conflicts with district office staff, staff turnovers, competing priorities for change and eroded school autonomy were viewed by a large proportion of principals as serious challenges to their school improvement initiatives. The main thrust of these findings was supported by Gousha (1986).

Leithwood and Stager's (1986) study of problem solving processes suggested that highly effective principals:

- with administrative experience, become more reflective about their own processes and refine these processes over time;
- although similar to moderately effective principals in general moral values and in personal values, are more influenced by their beliefs concerning principals' roles and responsibilities, and are more able to specify day-to-day consequences of such beliefs;
- are more aware of school system needs and requirements and try harder to take them into account in school-level problem solving;
- derive more personal enjoyment from problem solving and, partly as a consequence of this, are more proactive in dealing with school problems.

Finally, Tracy (1985) and Brubaker & Simon (1987) linked differences in the socialization experiences of men and women with differences in career aspirations and view of the principals' role. Such experiences appear to cause more men to seek the principalship earlier in their careers (before age 30) and to aspire to the superintendency as a career move. Gender related socialization experiences also seemed to contribute to a relatively large proportion of women viewing themselves more as curriculum and instructional leaders; relatively larger proportions of men, in contrast, viewed themselves as general managers. Greater amounts of formal education was also associated with a tendency for principals to view themselves as curriculum and instructional leaders.

Set B: External Influences and Internal Mental States or Processes

Eight studies were identified which provided data on the relationship between external influences and internal mental processes. Two of the eight studies concerned perceived job stress or feelings of "burnout" (Sarros and Friesen, 1987; Kottkamp and Travlos, 1986). Volume of work, poor interpersonal relations with staff and others, pressures from higher authorities and role conflict were external factors appearing to contribute to feelings of burnout.

Three studies examined a variety of external influences on principals job satisfaction (Caldwell and Paul, 1984; Sparkes, 1986; Gunn & Holdaway, 1986). External influences identified in these studies contributing to positive attitudes toward the job included larger school and community size, length of experience in the role and more qualification training. Such influences also included teacher ability, cooperative teacher attitudes, recognition by others of one's work and relatively lower levels of conflict and workload.

Set C: Internal Mental Processes and Principals' Practices

The relationship between internal mental processes and principals' practices seems to be a much neglected area of inquiry yet vital to an understanding of what principals do. Five studies conducted since 1985 and which focus on this area of the principalship were located. The independent variables in these studies were principals' beliefs, values and problem solving processes.

Taylor (1986) reported a strong association between the effectiveness of principals and their belief that all students can learn. Principals use of student achievement data in decision-making was associated, by Glasman (1985), with three sets of beliefs by principals concerning their control over the use of such data, and its value in program and teacher evaluation.

Using a hierarchy of values proposed by Hodgkinson (1978), Begley (1988) inquired into the role of such values in principals' decisions to adopt microcomputer technology in their schools. Principals with greater knowledge of the innovation and those

with an instructional orientation to their roles were more likely to make their adoption decision using the value "consequences for students." Other principals more often based their decisions on their personal preferences or some broad moral principle. Values of consequence increased as the basis for choice with increased knowledge among all types of principals.

Leithwood and Stager (1986, 1987) compared problem solving processes used by "highly effective" as compared with more "typical" principals. Their 1986 study reported significant differences between the two groups in their classification and management of problems and the specific problem solving strategies used. Their 1987 study inquired, in more detail, into problem solving strategies used in response to "messy" or unstructured problems. Differences between effective and typical principals were found in their interpretation or problem finding processes, the goals they pursued in problem solving and the nature and role of principles or values. Differences were also reported in relation to perceived constraints on problem solving, specific solution processes and mood. In general, effective principals demonstrated high levels of cognitive flexibility during problem solving as compared with their typical peers.

Set D: External Influences, Internal Mental States or Processes and Principals' Practices

The five studies in this set address three problems. The first problem, addressed by Daresh (1987) and Marshal & Greenfield (1987) concerns effectiveness in the early years of the principalship. These studies suggest that reduced effectiveness in one's early years as a principal and one's unwillingness to take risks is a direct function of inadequate skills (internal states) in (a) carrying out routine administrative procedures, (b) conflict management and (c) determining system-wide decision-making processes. It is also a function of feelings of dissonance with one's values and reduced excitement about school improvement. Such feelings and skill deficiencies are, in turn, attributed to external influences, notably restricted administrative experiences as a vice principal, inadequate formal training for the role and socialization processes prior to assuming the principalship.

Effective principals differ from their less effective peers, in part, in terms of the extent and quality of information used in their decision-making. McColskey, Altschuld and Lawton (1985) inquired into the reasons for variation among principals in this component of their practice. Training in social science research methods appeared to be an important external influence on such practice. Openmindedness and beliefs concerning the principal's role and the autonomy and power available to effect change in the school were internal influences identified.

Cousins (forthcoming) studied principals' use for professional development of appraisal data concerning their own performance. He found that principals' attitudes toward the appraisal process were predictive of the extent to which they learned about their performance. Attitudes were found to be associated with high levels of motivation for professional growth and inversely related to principals' experience and working knowledge. Use of appraisal data for decision-making was found to be linked to external variables (e.g., nature of decision to be made, communicative aspects of the appraisal process).

Finally, Trider and Leithwood (in press) and Leithwood (1986) found significant differences in influences on principals' practices depending on (a) the principals' orientation to the role (b) stage in the implementation process and (c) the principals training and/or policy-relevant knowledge. More instructionally oriented principals were less influenced by board or district factors and more guided by their own beliefs. As implementation proceeded, organizational context factors (e.g., staff input to decisions) within the school took on greater significance for all principals to the extent that such factors had the potential for solving emerging problems of implementation in the school: so, too, did the support available from various groups outside the school. This was consistent with evidence reported by Fullan, Anderson & Newton (1986) in relation to secondary school principals' efforts to implement a major instructional innovation in their school. Finally, school administrators with specialized knowledge in the policy area being implemented made decisions in a relatively autonomous fashion -- guided largely by their own

beliefs. These findings suggest the possibility, in fact, that principals' special knowledge (often the result of training) is one of the central determinants of the pattern of policy implementation behavior in which they engage. Principals without special knowledge seemed to rely extensively on the guidance provided by central office staff and the existing skills of staff. Perhaps their concern for working relationships can be attributed to their dependence on knowledge possessed by others and their desire to gain cooperation from such people to apply that knowledge in their school.

Summary and Conclusion: Influences on Principals' Practices

By way of summarizing this review of influences on principals' practices, four types of external factors have been identified: the principals' role (e.g., expectations, complexity), a large cluster of influences concerning the attitudes, abilities and behaviors of others (e.g., teachers' willingness to innovate), characteristics of the school system (e.g., district policies and procedures) and the principals' own "background" (e.g., training, socialization experiences). These external factors interact with principals' internal mental processes and states: personal traits (e.g., openmindedness), knowledge and beliefs (e.g., about what is best for students), values (e.g., consequences for students), attitudes and feelings (e.g., job satisfaction) and skills (e.g., problem solving, conflict management). Through such interactions the specific nature and effectiveness of principals' practices are shaped.

Training, an external factor associated with the principal's own background was associated with a number of internal states as well as with principals' practices. More specifically, formal types of training were associated with:

1. beliefs about the principal's role (more training was associated with an instructional leadership view of the role);
2. beliefs about the utility of formal evaluation data, as well as other informal sources of information and a tendency to both collect and use more of this information in practice (an attribute of effective practice). These beliefs were specifically associated with training in social science research methods;
3. knowledge about educational policies and their meaning, in practice. Such knowledge had a significant bearing on the way principals implemented policies initiated from outside their schools;

4. job satisfaction. Principals with higher levels of formal qualifications for the role reported higher levels of such satisfaction.

Informal types of training were also associated with internal states and practices. These forms of training included general socialization experiences in the profession and on the job training resulting from one's career path to the principalship (the two types are not generally different). General socialization experiences appeared to be the underlying cause of gender differences in such internal states as principals view of their role, career aspirations and effectiveness in providing instructional leadership. Informal, on-the-job training as a vice principal was typically reported to be a liability to effective practice because of the restricted opportunities provided for the development of leadership skills and because of its numbing effect on one's motivation and enthusiasm for school improvement.

Two implications for future research and practice merit highlighting by way of conclusion. First, the body of research evidence currently available which identifies and establishes relationships among external influences, internal states and principals' practices is extremely limited in quantity. It is also uneven in quality both conceptually and methodologically: for instance, there are no experimental studies exploring cause and effect relationships and little of the research is guided by a coherent theory to explain or suggest relationships among the variables of interest. There is a greater need for research exploring these relationships than there is more descriptive research on effective practice, for example.

The second implication concerns practice. At least based on the evidence reviewed in this paper, training is clearly a powerful influence on what principals do. Furthermore, even though formal training programs are often the subject of much criticism, they appear to warrant considerable support as strategies for educational improvement. Informal, on-the-job training appears to have been a badly neglected avenue for positively influencing practice. It appears, nevertheless, to offer considerable promise properly restructured.

Final Comments

Summaries at the end of each subsection of this review have noted areas in which knowledge is extensive and relatively robust; specific areas appearing to be most in need of further research were also identified. At the risk of too sweeping a generalization, it appears that we know most about effective practice (at least in relation to a restricted set of valuable outcomes for students and staff) and least about how such practice develops. If this is true, much could be learned through future, quasi-experimental field studies which included active, continuous intervention beginning in the early stages of aspiring administrators' development and continuing at least through their first several years in the role. Intervention would be best if it were comprehensive involving, for example, a redesign of informal socialization experiences (including career paths), provision of mentors, longterm formal training programs, peer-assisted coaching and practicum experiences.

Such longitudinal studies are, of course, difficult to support from agencies which typically fund research. But school districts have much to gain through such research and many are likely to find support for such work. In any event, such longterm collaborative field studies, involving active and sustained intervention, are part of the future research agenda for the Centre for Principal Development.

Notes

[1]This design involves selecting two groups of schools (using specified criteria), one group considered to be exceptionally "effective" and one group considered to be ineffective. Characteristics of the two groups of schools are then compared.

[2]Montgomery et al. (1987), Brady (1985), Williams (1986), Coleman & Hoffer (1987), Tracy (1985), Arubayi (1986), Ehiametalor (1985).

[3]Andrews, Soder and Jacoby (1986), Andrews (1986), High & Achilles (1986), Bradeson (1986), Coleman & Hoffer (1987).

[4]Andrews (1986), Andrews et al. (1986), Sharman (1987), Brady (1985), Blase, Dedrick & Strath (1986), Hoy & Brown (1986) and Johnson & Venable (1986).

[5]The Leader Behavior Description Questionnaire (LBDQ, Form xii) developed by Stagdill (1963) was used to collect these data.

[6]Ogawa and Hart (1983) estimated that 5% of the variance in student achievement in the schools in their study was attributable to the principals. Robinson and Wittebols (1986) claimed that, given the choice of training principals, training teachers or reducing class size, training principals is the most cost effective strategy. Neither of these studies could be considered conclusive, however.

[7]Such estimates of impact, it should be noted, are complicated by their dependence on context.

[8]Parts of this dimension might best be viewed as "internal mental processes" or states. It is reviewed in this sector, however, in the interest of presenting a more coherent description.

[9]Johnson & Venable (1986), Sussman (1986), Taylor (1986), Dwyer (1986), Watson et al. (1985), Pfiefer (1986), Mangieri and Arnn (1985), Sharman (1987), Stanard (1986), Russell, Mozzarella, White and Maurer (1985), Larsen (1987), High & Achilles (1986).

References

Alpern, M. (1987). Cultival change in an inner-city high school: the management of meaning and organization. Paper presented at annual meeting of the Canadian Association for the Study of Educational Administration, Hamilton, June.

Andrews, R. L., Soder, R., Jacoby, D. (1986). Principal roles, other in-school variables, and academic achievement by ethnicity and SES. Paper presented at Annual Meeting of American Educational Research Association, San Francisco, April.

Arubayi, E. (1986). An investigation of secondary school principals' estimated time usage in Nigeria: A comparative analysis with the U.S.. Journal of Research and Development in Education, 19 (2), 37-41.

Bacharach, S.B., Conley, S.C., Shedd, J.B. (1987). A career development framework for evaluating teachers as decision makers. Journal of Personnel Evaluation in Education, 1(2), 181-194.

Begley, P. (1988). The influence of beliefs and values of principals on the adoption and use of computers in the school. Unpublished doctoral dissertation, University of Toronto (OISE).

Blase, J., Dedrick, C., Strathe, M. (1986). Leadership behavior of school principals in relation to teacher stress, satisfaction, and performance. Journal of Humanistic Education and Development, 24 (4), 159-171.

Blumberg, A., Greenfield, W. The effective principal: Perspectives on school leadership. Boston: Allyn & Baron Inc.

Bradeson, P. V. (1985). An analyses of the metaphorical perspectives of school principals, Educational Administration Quarterly, 21 (1), 29-50.

Brady, L. (1985). The supportiveness of the principal in school-based curriculum development, Journal of Curriculum Studies, 17 (1), 95-97.

Bredeson, P. V. (1986). Principally speaking: An analysis of the interpersonal communications of school principals. Paper presented at the annual meeting of American Educational Research Association, San Francisco, April.

Brubaker, D. L., Simon, L. H. (1987). How do principals view themselves and others? NASSP Bulletin, 71 (495), 72-78.

Caldwell, W. E., Paul, D. M. (1984). Principals' input on self-interest issues influencing perceptions of organizational climate. Paper presented at the annual meeting of American Educational Research Association, New Orleans, April.

Chapman, J., Boyd, W. L. (1986). Decentralization, devolution and the school principal: Australian lessons on statewide educational reform. Educational Administration Quarterly, 22 (4), 25-58.

Chater, R. (1985). Aspects of decision making in secondary schools. Educational Management and Administration, 13 (3), 207-214.

Coleman, J.S., Hoffer, T. (1987). Public and private schools. New York: Basic Books Inc.

Cousins, J.B. (forthcoming). Factors influencing principals' use of performance appraisal data. Doctoral dissertation. Toronto: University of Toronto (OISE).

Crowson, R. L., Morris, V. R. (1985). Administrative control in large city school systems: An investigation in Chicago. Educational Administration Quarterly, 21 (4), 51-70.

Cuban, L. (1986). Principaling: Images and Roles. Peabody Journal of Education, 63 (1), 107-119.

Davies, L. (1987). The role of the primary school head. Educational Management and Administration, 15, 43-47.

Daresl, J. (1987). The highest hurdles for the first year principal. Paper presented at the annual meeting of the American Educational Research Association, Washington, April.

Dwyer, D. C. (1986). Understanding the principal's contribution to instruction. Peabody Journal of Education, 63 (1), 3-18.

Ehiametalor, E T. (1985). Primary school principals' performance in critical administrative task areas. Journal of Negro Education, 54 (4), 566-574.

Firestone, W. A., Wilson, B. L. (1985). Using bureaucratic and cultival linkages to improve instruction: The principal's contribution. Educational Administration Quarterly, 21 (2), 7-30.

Ford Foundation. (1984). City high schools: A recognition of progress. New York: Ford Foundation.

Fullan, M., Anderson, S.E., Newton, E. (1986). Support systems for implementing curriculum in schools. Toronto: The Queen's printer for Ontario.

Fuller, B. (1987). What school factors raise achievement in the Third World. Review of Educational Research, 57(3), 255-292.

Gally, J. (1986). The structure of administrative behavior: An international dimension in educational administration. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, April.

Glasman, N. (1985). Perceptions of school principals about their engagement in evaluation on the basis of student data. Studies in Educational Evaluation, 11 (2), 231-236.

Gousha, R.P. (1986). The Indiana school principalship: The role of the Indiana principal as defined by the principal. Bloomington, Indiana: Indiana University, School of Education.

Gunn, J. A., Holdaway, E. A. (1986). Perceptions of effectiveness, influence and satisfaction of senior high school principals. Educational Administration Quarterly, 22 (2), 43-62.

Hall, G., Rutherford, W.L., Hord, S.M., Huling, L.L. Effects of three principal styles on school improvement. Educational Leadership, 41(5), 22-31.

Hart, A. W. (1987). Leadership succession: reflections of a new principal. Journal of Research and Development in Education, 20 (4), 1-11.

Heim, J. M., Wilson, A. P. (1978). Situational factors contributing to administrator turnover in small Kansas school districts and high schools. Paper presented at the United School Administrators Conference, Witchita, January.

High, R. M., Achilles, C. M. (1986). Principal influence in instructionally effective schools. Paper presented at annual meeting of American Educational Research Association, San Francisco, April.

Hodgkinson, C. (1978). Toward a philosophy of administration. Oxford: Basil Blackwell.

Hoy, W. K., Brown, B. L. (1986). Leadership of principals, personal characteristics of teachers, and the professional zone of acceptance of elementary teachers. Paper presented at annual meeting of American Education Research Association, San Francisco, April.

Huddle, E. (1986). Creating a successful secondary school. NASSP Bulletin, 70, (491), 64-69.

Johnson, G. S., Venable, B. P. (1986). A study of teacher loyalty to the principal: Rule administration and hierarchial influence of the principal. Educational Administration Quarterly, 22, (4), 4-27.

Kingdon, H. C. (1985). The role of the teaching elementary school principal. Principal Issue, 4, 20-23.

Kokkamp R. B., Travlos, A. L. (1986). Selected job stressors, emotional exhaustion, job satisfaction, and thrust behavior of the high school principal. Alberta Journal of Educational Research, 32 (3), 234-248.

Larsen, T.J. (1987). Identification of instructional leadership behaviors and the impact of their implementation on academic achievement. Paper presented at the annual meeting of the American Educational Research Association, Washington, April.

Leithwood, K.A. (1986). The role of the secondary school principal in policy implementation and school improvement. Toronto: Queen's Printer for Ontario.

Leithwood, K.A., Montgomery, D.J. (1986). Improving principal effectiveness: The principal profile. Toronto: OISE Press.

Leithwood, K.A., Montgomery, D.J. (1984). Obstacles preventing principals from becoming more effective. Education and Urban Society, 17(1), 73-88.

Leithwood, K.A., Montgomery, D.J. (1982). The role of the elementary school principal in program environment. Review of Educational Research.

Leithwood, K.A., Ross, J., Montgomery, D.J. (1982). An investigation of curriculum decision making. In K.A. Leithwood (Ed.), Studies in Curriculum decision-making. Toronto: OISE Press.

Leithwood, K.A., Stager, M. (1987). Components of expertise: Artistry in principals' problem-solving. Paper presented at the Annual Meeting of the Canadian Association for the Study of Educational Administration, Hamilton.

Leithwood, K.A., Stager, M. (1986). Differences in problem solving processes used by moderately and highly effective principals. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco.

Lipsitz, J. (1984). Successful schools for young adolescents. New Brunswick, N.J.: Transaction Books.

Louis, Karen Seashore (in press). The role of school districts in school innovation. In M. Holmes, K. Leithwood and D. Musella (Eds.), School system policies for school improvement. Toronto: OISE Press.

MacPherson, M. A. (1985). Burnout and the school principal. The Canadian Administrator, 25 (1), 1-4.

Mangieri, J. N., Arnn, J. W. (1985). Excellent schools: The leadership functions of principals. American Education, 21 (3), 8-10.

Marshall, C., Greenfield, W. (1987). The dynamics in the encultivation and the work in the assistant principalship. Urban Education, 22 (1), 36-52.

Martin, R. A. (1985). Supervisory communications and support linkages between high school principals and teachers. Paper presented at the annual meeting of the American Educational Research Association, Chicago, March.

McColskey, W. H., Altschuld, J. W., Lawton, R. W. (1985). Predictors of principals' reliance on formal and informal sources of information. Educational Evaluation and Policy Analysis, 7 (4), 427-436.

Montgomerie, T.C., McIntosh, r.G., Mattson, N.A. (1987). The role of the principal: Superhero with a big stick? Paper presented at the annual meeting of the Canadian Society for the study of Educational Administrators.

Ogawa, R.T., Hart, A.W. (1983). The effects of principals on the instructional performance of schools. Paper presented at the annual meeting of the American Educational Research Association, Montreal, April.

Peterson, K. D. (1986). Vision and problem finding in principals' work: Values and cognition in administration. Peabody Journal of Education, 63 (1), 87-106.

Pfeifer, R.S. (1986). Enabling teacher effectiveness: Teachers' perspectives on instructional management. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, April.

Poueche, J. E., Baker, G. A. (Eds.) (1986). Profiling excellence for America's schools. Arlington, VA: American Association of School Administrators.

Reed, D. B., Himmler, A. H. (1985). The work of the secondary assistant principalship: A field study. Education and Urban Society, 18 (1), 59-84.

Reynolds, C. (1987). Naming the experience: Women, men, and their changing work lives as teachers and principals. Unpublished doctoral dissertation. University of Toronto, OISE.

Robinson, G., Wittebols, J. (1986). Class size research: A related cluster analysis for decision making. Arlington, VA.: Educational Research Services, Inc.

Russell, J. S., Mozzarella, J. A., White, T., Maurer, S. (1985). Linking the behaviors and activities of secondary school principals to school effectiveness: A focus on effective and ineffective behavior. Eugene, OR.: Center for Educational Policy and Management.

Salley, C., McPherson, R.B., Baehr, M.E. (1978). What principals do: A preliminary occupational analysis. In D.a. Erickson & T.L. Reller (Eds.), The principal in metropolitan schools. Berkely, CA.: McCutchan.

Sarros, J.R., Friesen, D. (1987). The etiology of administration burnout. The Alberta Journal of Educational Research, 33 (3), 163-180.

Sergiovanni, T.J. (1984). Leadership and excellence in schooling. Educational Leadership, 41(5), 4-13.

Sharman, R.G. (1987). Organizational supports for implementing an instructional innovation. The Alberta Journal of Educational Research, 33(4), 236-246.

Sparkes, R. L. (1986). Principal job satisfaction in Newfoundland and Labrador. Newfoundland Teachers' Association Journal, 74 (1), 14-15.

Stagdill, (1963). Manual for the Leader Behaviour Description Questionnaire -- Form XII: An experimental revision. Columbus: The Ohio State University, Bureau of Business Research.

Stanard, M. (1986). Rural principal: A case study of an effective disciplinarian. Rural Education, 8 (1), 16-21.

Stevens, W., Marsh, L.D.D. (1987). The role of vision in the life of elementary school principals. Paper presented at the annual meeting of the American Educational Research Association, Washington, D.C.

Sussman, L. (1986). The principal's first year: The mutual process of developing leadership. Paper presented at the annual meeting of the American Educational Research Association, San Francisco.

Taylor, B. O. (1986). How and why successful elementary principals address strategic issues. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, April.

Thomas, A. R. (1986). Up and over with the principalship down under. Paper presented at the annual meeting of the American Educational Research Association. San Francisco. April.

Tracy, S. J. (1985). Career patterns and aspirations of elementary school principals: The gender difference. Journal of NAWDAC, 49 (1), 23-28.

Trider, D.M.A., Leithwood, K.A. (in press). Influences on principals' practices. Curriculum Inquiry.

Watson, P. et. al. (1985). The school makes a difference: Analysis of teacher perceptions of their principal and school climate. Paper presented at the annual meeting of the American Educational Research Association. Chicago, March.

Williams, L. (1986). Principals' perceptions of their instructional leadership role. St. John's, Newfoundland: Memorial University of Newfoundland.

Wolfgang, S. Marsh, D. (1987). The role of vision in the life of elementary school principals. Paper presented at the annual meeting of the American Educational Research Association. Washington, April.

APPENDIX A

Methodological Characteristics of Studies

(N = 54)

Methodological Characteristics of Original Empirical Studies Reviewed						
Authors	Design	Subjects	Sample Size (Achieved)	Sources Instruments	Sampling Procedures	Information Provided
Alpern (1987) S	Case Study	School Multiple roles Multiple roles	1 14 Not reported	Interviews Informal interviews Documents	Selected	P
Andrews, Soder & Jacoby (1986) E	Survey	Teachers Students	67 2,145 (1984) 2,303 (1985) 3515	Questionnaire Achievement test California Achievement Test	Total population (1 school district)	P E
Arubayi (1986) S	Survey	Secondary Principals	133	Questionnaire	Random	P
Begely (1988)	Multiple Case Study	Principals Computer Consultants	15 sites 1	Interviews Archival data	Selected	M
Blase, Dedrick Strathe (1986) E S	Survey	Teachers	168	Questionnaire	Selected	P E
Bredeson (1986) E S	Multiple Case Study	Principals	5	Interviews Observations Documents test	Selected	P
Brady (1985) (E)	Survey	Principals Leaders	20 252	Questionnaires	"Stratified proportional systematic selection"	P F E
Bredeson E S	Multiple Case Study	Elementary principals Secondary principals	2 1	Observation shadowing	Selected	M P
Brubaker & Simon (1987) E S	Survey	Principals	370	Questionnaires	Not reported	I M
Caldwell & Paul (1984) S	Survey	Principals Asst principals	200 100	Questionnaire	Not clear	I M
Chapman & Boyd (1986) S	Survey	Multiple roles	60	Interviews	Selected	I
Chater (1985) S	Multiple Case Study	Principals Other school staff	1 45	Interviews	Selected	P
Coleman & Hoffer (1987) S	Survey	Students	25,000	Achievement tests Indices of student characteristics	Random	E

Authors	Design	Subjects	Sample Size Achieved	Sources Instruments	Sampling Procedures	Information Provided
Cousins (forthcoming) E	Multiple Case Study	Principals Super-intendents Teachers Parents	4 sites	Interviews Archival data	Selected	E,M
Crawson & Morris (1985) E,S	Multiple Case Study	Elementary principals Secondary principals	17 -	Observation	Selected	E,M
Dareen (1987) E,S	Survey	Principals	12	Interviews	Selected	I
Davies (1987) E	Mutliple Case Study	Principals	4	Observations	Selected	P
Dwyer (1986) E,S	Multiple Case Studies	Schools Principals Teachers, students and others	12 12 not reported	Interviews Observations	Selected	I,P,F
Ehiametalor (1985) E	Survey	Principals School inspectors	177 Not reported	Questionnaires	Random selected	I,P
Ford Foundation (1984) S	Multiple Case Study	School staffs	110 schools	Interviews Observations	Selected	P
Fullan, Anderson & Newton (1986) S	Multiple Case Study	Super-intendents Consultants Principals Teachers	32 37 (59) 16 32	Interview Questionnaire	All supervisory officers Random Selected others	E,M
Gally (1986) S	Multiple Case Studies	Principals	8	Observation	Selected	P
Glasman (1985) E	Survey	Highly effective elementary principals Ineffective principals	174 97	Questionnaire	Selected ("supervisor-nominee")	M,P
Gousha (1986) E,S	Survey	Prinipals	600	Questionnaire	Total population in one state	I,P,M
Gunn, Holdaway (1986) S	Survey	Principals Principals	100 questionnaires) 10 interviews)	Questionnaires Interviews	Total population Volunteer	I,M
Hart (1987) S	Case Study	Principal	1	Observations Interviews Documents	Selected	I,M
Huddle (1986) S	Multiple Case Study	School staffs	571 schools	Interviews Observations	Selected	E

Authors	Design	Subjects	Sample Size Achieved	Sources Instruments	Sampling Procedures	Information Provided
Hoy & Brown (1986) E	Survey	Teachers in schools 46	994	Questionnaires	Selected within 1 county	P.E
Hugh. Achilles (1986) E. S	Modified Outlier Plus Survey	Schools Teachers Principals Students	10 Not reported 10 Not reported	Questionnaires Observations Interviews Achievement test CAT	Selected schools High achieving and "Other" schools	P
Johnson & [illegible] 1986) E S	Survey	Schools Principals Teachers	70 70 650	Questionnaires Interviews	Selected	P E
Kingdon (1985) E	Multiple Case Studies	Principals	7	Daily Logs Observations	Selected	P I
Kottkamp & Travlos (1986) S	Survey	Principals Teachers	74 Not reported	Questionnaire	Selected Random within selected schools	E.M
Larsen (1987) E	Survey	Principals Teachers	89 421	Questionnaires	Selected - Stratified	P E
Leithwood (1986) S	Survey	Principal	159	Questionnaire	Selected	E.M
Leithwood & Stager (1986) E	Multiple Case Study	Principals	22	Interview	Selected	E.M
Leithwood & Stager (1987) E	Multiple Case Study	Principals	22	Interview	Selected	M
Lipsitz (1984) S	Multiple Case Study	School staffs	4 schools	Observation	Selected	I.P
Louis in press S	Survey Case Studies	Principals School staffs	219 5	Questionnaire Interviews	Selected Selected	I
Mangrem & Arnn (1985) S	Survey	Secondary principals	111	Questionnaire	Selected	P
Marsh & Stevens (1987) E	Survey	Principals	12	Interview	Selected	P.M
Marshall, Greenfield (1987) S	Multiple Case Study	Vice Principals	3	Obervation Interviews	Selected	I
Martin (1985) S	Survey	Principals Teachers	175 (approx.) 195 (approx.)	Questionnaire	Total population within 1 state	P I

Authors	Design	Subjects	Sample Size Achieved	Sources Instruments	Sampling Procedures	Information Provided
McColskey, Altschuld, Lawton (1985) S	Survey	Secondary principals	153	Questionnaire	Total population of Ohio secondary principals in schools with more than 1000 students	I,M,P
Montgomerie, McIntosh & Mattson (1987) E,S	Repeated surveys (3 in total)	Teachers School administrators Super-intendents Board chairs	286 240 83 65	Questionnaires Interviews	Cluster Sample random Total population within region	P
Peterson (1986) E	Multiple Case Studies	Principals	4	Interviews Observations	Selected	I,M,P
Pfeifer (1986) E,S	Survey	Teachers	85	Interview	Selected	P
Reed, Himmler (1985) S	Multiple Case Study	Secondary Assistant Principals	4	Interviews Observations Documents	Selected	P,I
Reynolds (1987) E,S	Survey	Principals - men - women	24 (12) (12)	Interviews	Selected	I,M,P
Rourche & Baker (1986) S	Survey	Teachers Principals Schools	89 34 154	Questionnaires Rating scales	Selected	P
Russell et al (1987) S	Survey	Super-intendents Principals	72	Interviews Document analysis	Selected	I,P,M
Sarros & Friesen (1987) E,S	Survey	Principals Ass't principals	66 62	Questionnaire	Total Population One district	I,M
Sharman (1987) E	Survey	Teachers Schools	155 22	Questionnaires	Total population one district	P,E
Sparkes (1986) E,S	Survey	Principals	416	Questionnaires	Total population Newfoundland & Labrador	I,M
Stanard (1986) S	Case Study	Principal Members of school board & community	1 Not reported	Observation Interviews Questionnaires	Selected	P
Sussman (1986) E	Case Study	Principals Teachers Parents Community administrators	1 11 Not reported Not reported	Interviews Documents Observation	Selected	P,E
Taylor (1986) E	Survey	Principals	22	Interviews Observations	Selected	M,P

Authors	Design	Subjects	Sample Size (Achieved)	Sources Instruments	Sampling Procedures	Information Provided
Tracy (1985) (E)	Survey	Principals	234	Questionnaires	Random	I.M
Trider & Leithwood in press	Multiple Case Study	Elementary principal Secondary principal	15 8	Interview	Random	E.M
Watson (1985) (E.S)	Survey	Teachers	1294	Questionnaire	Total population within 1 school system	P.I
Williams 1986 E.S	Survey	Elementary principals Junior High principals High school principals	4 3 3	Interviews	Random	P.F